

2019-2020
Vermont Fertilizer Analysis Report



Vermont Agency of Agriculture, Food and Markets
Public Health & Agricultural Resource Management
116 State Street
Montpelier, VT 05620-2901

Dear Reader:

This annual report summarizes all fertilizer sampling and analyses conducted by the Agency from January 1, 2019 through December 31, 2020. The report includes a summary total for each company from which greater than 10 samples was collected. All samples are listed individually. In 2019, a total of 61 fertilizer samples were collected and analyzed. For these samples, the Agency's laboratory conducted 171 chemical analyses for nitrogen, available phosphorous, potash, and numerous secondary nutrients such as calcium, magnesium, sulfur, iron, zinc, and boron. In 2020, a total of 152 fertilizer samples were collected and analyzed. For these samples, the Agency's laboratory conducted 351 chemical analyses for nitrogen, available phosphorous, potash, and numerous secondary nutrients such as calcium, magnesium, sulfur, iron, zinc, and boron.

The purpose of the sampling and testing is to ensure that fertilizer consumers are receiving products that conform to the label guarantee for all nutrients. 12 samples failed to meet the label guarantee for one or more nutrients in 2019 and 31 failed to meet the label guarantee in 2020.

Fertilizer manufacturers can be assessed penalties for product deficiencies which exceed the permitted analytical variance. The dollar value of a penalty is based on how far below the guarantee a sample is, the total weight of the lot sampled, and the cost of the nutrient that is deficient. If a consumer is not identified, the penalty is paid to the Agency's fertilizer program.

If you have any questions regarding this report or Vermont's Fertilizer Program, please contact the Public Health and Agriculture Resource Management Division; Vermont Agency of Agriculture, Food and Markets; 116 State Street; Montpelier, VT 05620-2901, or call (802) 828-5050.

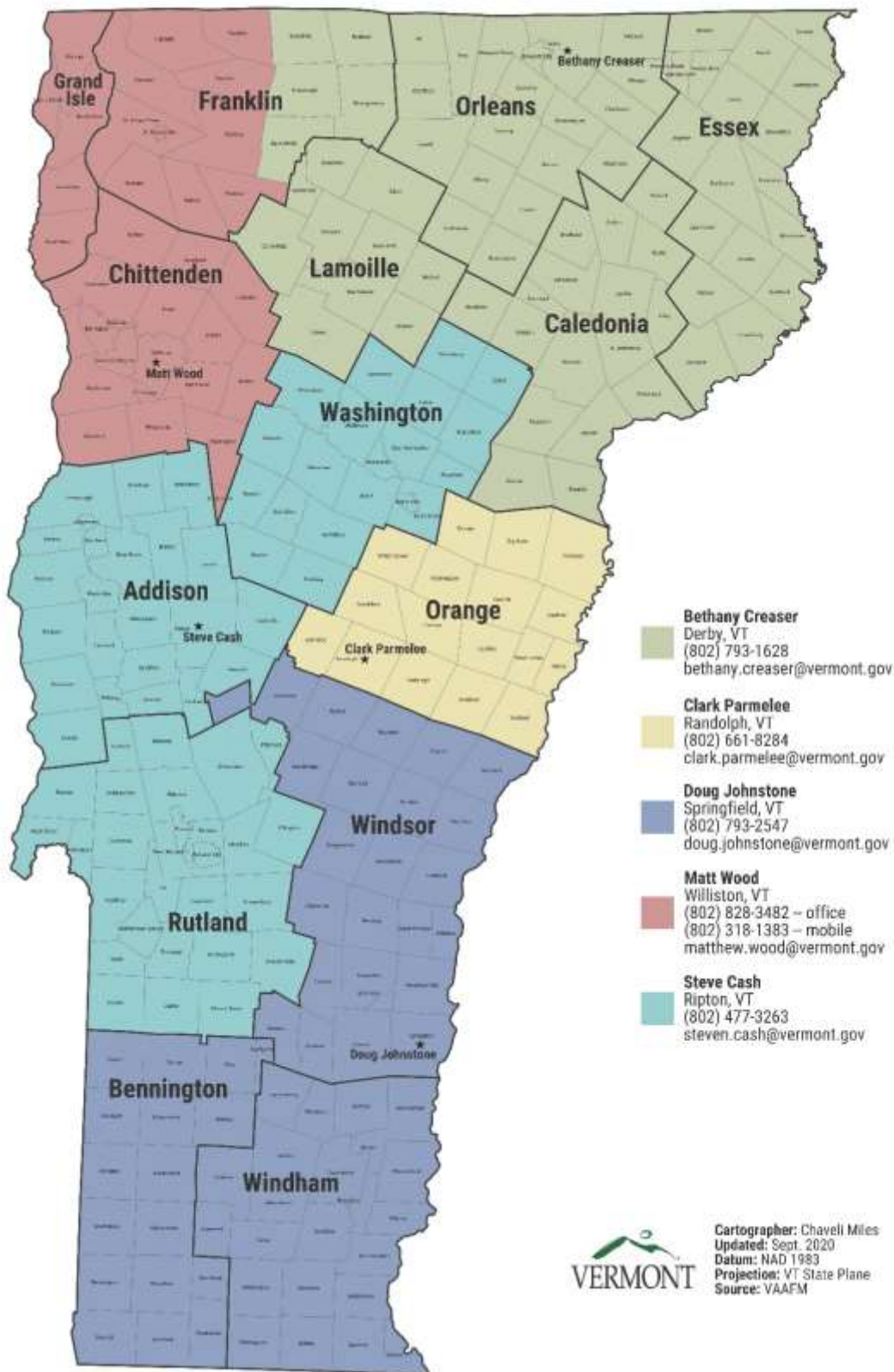
Sincerely,

A handwritten signature in black ink, appearing to read 'Cary Giguere', with a stylized, cursive script.

Cary Giguere
Director

Fertilizer Staff

Cary Giguere	Director
Linda Boccuzzo	Section Chief
Lisa Fantelli	ARM Specialist
Steven Cash	Field Agent
Bethany Creaser	Field Agent
Doug Johnstone	Field Agent
Clark Parmelee	Field Agent
Matt Wood	Field Agent



2019 Fertilizer Summary Table

Fertilizer Companies with 10 or More Samples Taken

Company	Samples Collected	Nutrients Analyzed	# of Sample Violations
Northeast Ag Sales	55	161	11
Total of All Samples	55	161	11

Fertilizer Sample Chart Definitions

Pass: A sample receives a pass status if the guarantee for nitrogen, phosphorous or potash it is equal to or greater than the test results.

Fail: A Sample is considered deficient if the guarantee for nitrogen, phosphorous or potash exceeds The Association of American Plant Food Control Officials' (AAPFCO) established permitted analytical variance at an established confidence level of 97.5%.

Within Tolerance: A sample is within tolerance if it is greater than the AAPFCO's established permitted analytical variance at an established confidence level of 97.5% but less than 100%.

2019 Fertilizer Sample Results

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
29001	Carovail	21-17-0	20.99	14.17	.00	Fail	Fail
451901	Northeast Ag Sales Inc	28-0-15	29.63	.00	16.54	Pass	Pass
451902	Northeast Ag Sales Inc	8-8-16	10.52	8.62	15.96	Pass	Within Tolerance
451903	Northeast Ag Sales Inc	23-7-23	21.26	8.07	24.92		Fail
451904	Northeast Ag Sales Inc	34-0-10	33.18	.00	11.46	Pass	Within Tolerance
451905	Northeast Ag Sales Inc	34-0-10	33.83	.00	12.52	Pass	Within Tolerance
451906	Northeast Ag Sales Inc	18-0-31	17.67	.00	34.86	Pass	Within Tolerance
451907	Northeast Ag Sales Inc	18-0-31	19.93	.00	33.04	Pass	Pass
451908	Northeast Ag Sales Inc	18-0-31	18.08	.00	35.64	Pass	Pass
451909	Northeast Ag Sales Inc	18-0-31	18.01	.00	36.97	Pass	Pass
451910	Northeast Ag Sales Inc	23-12-18	24.07	11.25	20.11		Within Tolerance
451911	Northeast Ag Sales Inc	26-2-20	27.43	2.16	22.15	Pass	Pass
451912	Northeast Ag Sales Inc	23-7-23	23.17	6.34	25.07		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
451913	Northeast Ag Sales Inc	24-6-12	25.44	5.27	12.89		Within Tolerance
451914	Northeast Ag Sales Inc	23-7-23	24.46	6.35	23.48		Within Tolerance
451915	Northeast Ag Sales Inc	45-0-0	46.04	.00	.00		Pass
451916	Northeast Ag Sales Inc	34-0-15	33.22	.00	17.74		Within Tolerance
451917	Northeast Ag Sales Inc	24-6-12	24.96	5.71	12.14		Within Tolerance
451918	Northeast Ag Sales Inc	25-12-18	24.30	10.19	19.19		Fail
451919	Northeast Ag Sales Inc	20-6-10	19.71	7.07	10.03		Within Tolerance
451922	Northeast Ag Sales Inc	23-0-23	23.06	.00	24.56		Pass
451924	Northeast Ag Sales Inc	7-24-3	7.83	24.28	2.68		Within Tolerance
451923	Northeast Ag Sales Inc	7-24-3	8.13	23.16	2.70		Within Tolerance
451925	Northeast Ag Sales Inc	30-5-15	30.94	5.12	13.35		Fail
451926	Northeast Ag Sales Inc	30-5-15	30.05	4.68	15.19		Within Tolerance
451927	Northeast Ag Sales Inc	30-0-20	30.03	.00	22.10		Pass
451928	Northeast Ag Sales Inc	25-5-15	30.38	4.36	13.36		Fail
451929	Northeast Ag Sales Inc	25-5-15	24.38	5.56	14.45		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
451930	Northeast Ag Sales Inc	25-5-15	25.81	5.19	14.54		Within Tolerance
451931	Northeast Ag Sales Inc	25-5-15	29.39	4.45	14.79		Within Tolerance
451932	Northeast Ag Sales Inc	25-5-15	23.01	5.96	15.13		Fail
451933	Northeast Ag Sales Inc	25-5-15	22.98	5.53	15.91		Fail
451934	Northeast Ag Sales Inc	25-5-15	28.56	4.93	14.12		Within Tolerance
451935	Northeast Ag Sales Inc	25-5-15	24.56	5.30	15.43		Within Tolerance
451936	Northeast Ag Sales Inc	25-5-15	30.09	5.06	13.92		Within Tolerance
451937	Northeast Ag Sales Inc	30-0-15	29.42	.00	17.36	Pass	Within Tolerance
451939	Northeast Ag Sales Inc	10-20-10	10.86	19.56	12.42		Within Tolerance
451940	Northeast Ag Sales Inc	12-15-18	12.59	14.54	23.45	Fail	Fail
451941	Northeast Ag Sales Inc	23-7-23	25.25	6.26	23.97		Within Tolerance
451942	Northeast Ag Sales Inc	23-7-23	22.75	6.96	25.94		Within Tolerance
451944	Northeast Ag Sales Inc	23-7-23	22.07	.00	32.27		Within Tolerance
451946	Northeast Ag Sales Inc	17.11-11.1-10.44	17.39	10.44	16.86	Within Tolerance	Fail
451947	Northeast Ag Sales Inc	17.11-11.1-16.7	17.04	10.45	17.59	Within Tolerance	Within Tolerance
451948	Northeast Ag Sales Inc	17.11-11.1-16.7	16.46	10.73	17.93	Within Tolerance	Within Tolerance
451949	Northeast Ag Sales Inc	32-0-0	32.25	.00	.00		Pass
451950	Northeast Ag Sales Inc	6-23-3	7.50	20.73	2.78		Fail
451545	Northeast Ag Sales Inc	23-0-30	23.18	.00	31.43		Pass
451951	Northeast Ag Sales Inc	10-10-10	9.43	10.75	8.35		Fail

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
451952	Northeast Ag Sales Inc	25-0-15	25.08	.00	14.90		Within Tolerance
451953	Northeast Ag Sales Inc	34-0-15	34.65	.00	14.03		Within Tolerance
451954	Northeast Ag Sales Inc	30-0-15	29.31	.00	16.64	Pass	Within Tolerance
451955	Northeast Ag Sales Inc	30-0-15	31.94	.00	14.11	Pass	Within Tolerance
451956	Northeast Ag Sales Inc	39-0-0	36.70	.00	.00	Pass	Fail
451958	Northeast Ag Sales Inc	15-0-40	14.91	.00	41.10		Within Tolerance
451959	Northeast Ag Sales Inc	39-0-0	38.84	.00	.00		Within Tolerance
451960	Northeast Ag Sales Inc	5-4-3	4.49	4.34	4.66		Within Tolerance
451920	Yara North America Inc	46-0-0	46.29	.00	.00		Pass
451921	Yara North America Inc	46-0-0	46.22	.00	.00		Pass
451938	Yara North America Inc	46-0-0	46.58	.00	.00		Pass
451943	Yara North America Inc	46-0-0	46.68	.00	.00		Pass
451957	Yara North America Inc	0-0-60	.00	.00	62.12		Pass

2020 Fertilizer Summary Table

Fertilizer Companies with 10 or More Samples Taken

Company	Samples Collected	Nutrients Analyzed	# of Sample Violations
Bourdeau Bros.	62	124	8
Everris NA Inc.	12	24	0
Lawes Ag. Services Inc.	36	91	9
Northeast Ag Sales Inc.	27	73	12
Total of All Samples	137	312	29

Fertilizer Sample Chart Definitions

Pass: A sample receives a pass status if the guarantee for nitrogen, phosphorous or potash it is equal to or greater than the test results.

Fail: A Sample is considered deficient if the guarantee for nitrogen, phosphorous or potash exceeds The Association of American Plant Food Control Officials' (AAPFCO) established permitted analytical variance at an established confidence level of 97.5%.

Within Tolerance: A sample is within tolerance if it is greater than the AAPFCO's established permitted analytical variance at an established confidence level of 97.5% but less than 100%.

2020 Fertilizer Sample Results

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7634	Bourdeau Brothers	6-24-6	6.12	23.8	6.12		Pass
7635	Bourdeau Brothers	6-24-6	5.57	23.20	6.05		Within Tolerance
7636	Bourdeau Brothers	6-24-6	5.73	23.8	5.95		Pass
7638	Bourdeau Brothers	6-24-6	5.73	23.20	6.00		Within Tolerance
7639	Bourdeau Brothers	6-24-6	5.83	23.8	6.06		Pass
7640	Bourdeau Brothers	6-24-6	5.62	23.9	6.10		Pass
7645	Bourdeau Brothers	6-24-6	5.70	23.8	6.07		Pass
7646	Bourdeau Brothers	6-24-6	5.86	23.6	5.85		Pass
7647	Bourdeau Brothers	6-24-6	5.82	23.7	6.06		Pass
7655	Bourdeau Brothers	10-17-20	9.86	16.80	18.70		Within Tolerance
7679	Bourdeau Brothers	10-13-27	10.30	13.70	27.50	Fail	Pass
7678	Bourdeau Brothers	10-13-27	10.49	14.80	28.73	Fail	Pass
7677	Bourdeau Brothers	10-13-27	9.34	13.40	32.00	Fail	Within Tolerance
7653	Bourdeau Brothers	10-13-27	10.91	14.20	26.20	Fail	Within Tolerance
7616	Bourdeau Brothers	0-0-60	.00	.00	61.40		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7617	Bourdeau Brothers	0-0-60	.00	.00	60.95		Pass
7618	Bourdeau Brothers	0-0-60	.00	.00	62.50		Pass
7619	Bourdeau Brothers	0-0-60	.00	.00	63.30		Pass
7651	Bourdeau Brothers	11-0-45	17.17	13.20	40.35		Fail
7605	Bourdeau Brothers	11-52-0	10.43	49.00	.30		Fail
7606	Bourdeau Brothers	11-52-0	10.46	50.60	.30		Fail
7607	Bourdeau Brothers	11-52-0	10.75	53.80	.68		Within Tolerance
7681	Bourdeau Brothers	11-52-0	10.66	51.50	1.72		Within Tolerance
7676	Bourdeau Brothers	11-52-0	10.70	52.00	.75		Within Tolerance
7674	Bourdeau Brothers	11-52-0	10.31	53.80	.40		Within Tolerance
7652	Bourdeau Brothers	14-30-15	13.86	28.90	15.80		Fail
7650	Bourdeau Brothers	18-18-18	20.68	18.20	18.95		Pass
7604	Bourdeau Brothers	18-46-0	17.97	45.50	.30		Within Tolerance
7608	Bourdeau Brothers	18-46-0	18.23	44.80	.35		Fail
7611	Bourdeau Brothers	18-46-0	17.57	44.80	.23		Fail
7612	Bourdeau Brothers	18-46-0	17.54	45.80	.18		Within Tolerance
7642	Bourdeau Brothers	18-46-0	17.64	43.60	.22		Fail
7649	Bourdeau Brothers	18-46-0	17.68	46.10	.05		Within Tolerance
7656	Bourdeau Brothers	18-46-0	17.56	45.80	.57		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7657	Bourdeau Brothers	18-46-0	17.55	46.20	.37		Within Tolerance
7658	Bourdeau Brothers	18-46-0	17.45	46.00	.32		Within Tolerance
7675	Bourdeau Brothers	31-7-12	30.35	7.25	12.60		Within Tolerance
7654	Bourdeau Brothers	31-7-12	32.36	7.68	11.80		Within Tolerance
7637	Bourdeau Brothers	32-0-0	31.58	.00	.00		Within Tolerance
7641	Bourdeau Brothers	32-0-0	31.00	.00	.00		Within Tolerance
7643	Bourdeau Brothers	32-0-0	31.14	.00	.00		Within Tolerance
7644	Bourdeau Brothers	32-0-0	31.85	.00	.00		Within Tolerance
7609	Bourdeau Brothers	46-0-0	46.50	.00	.00		Pass
7610	Bourdeau Brothers	46-0-0	46.22	.00	.00		Pass
7613	Bourdeau Brothers	46-0-0	47.51	.00	.00		Pass
7614	Bourdeau Brothers	46-0-0	46.79	.00	.00		Pass
7615	Bourdeau Brothers	46-0-0	46.34	.00	.00		Pass
7620	Bourdeau Brothers	46-0-0	46.45	.00	.00		Pass
7621	Bourdeau Brothers	46-0-0	45.99	.00	.00		Within Tolerance
7622	Bourdeau Brothers	46-0-0	46.10	.00	.00		Pass
7623	Bourdeau Brothers	46-0-0	45.97	.00	.00		Within Tolerance
7624	Bourdeau Brothers	46-0-0	44.07	.00	.00		Fail
7625	Bourdeau Brothers	46-0-0	45.28	.00	.00		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7626	Bourdeau Brothers	46-0-0	45.49	.00	.00		Within Tolerance
7627	Bourdeau Brothers	46-0-0	45.89	.00	.00		Within Tolerance
7628	Bourdeau Brothers	46-0-0	46.02	.00	.00		Pass
7629	Bourdeau Brothers	46-0-0	46.57	.00	.00		Pass
7630	Bourdeau Brothers	46-0-0	45.37	.00	.00		Within Tolerance
7631	Bourdeau Brothers	46-0-0	46.82	.00	.00		Pass
7632	Bourdeau Brothers	46-0-0	45.88	.00	.00		Within Tolerance
7633	Bourdeau Brothers	46-0-0	45.73	.00	.00		Within Tolerance
7648	Bourdeau Brothers	6--24-6	6.04	22.50	5.84		Pass
220002	Carovail	0-0-38	.00	.00	46.20		Pass
220003	Carovail	0-0-38	.00	.00	45.90	Within Tolerance	Within Tolerance
220004	Carovail	0-0-38	.00	.00	44.40	Within Tolerance	Within Tolerance
220001	Carovail	18-15-0	17.21	13.00	.24	Within Tolerance	Fail
452035	Darling Ingredients Inc	10-2-8	10.75	3.20	7.72		Within Tolerance
452040	Darling Ingredients Inc	10-2-8	11.00	3.26	7.26		Within Tolerance
452041	Darling Ingredients Inc	10-2-8	11.19	3.39	7.36		Within Tolerance
452036	Darling Ingredients Inc	13-0-0	13.02	.00	.00		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
452042	Darling Ingredients Inc	13-0-0	12.73	.00	.00		Within Tolerance
452010	Everris NA Inc	39-0-0	40.27	.00	.00	Pass	Pass
452003	Everris NA Inc	39-0-0	39.10	.00	.00	Within Tolerance	Within Tolerance
452004	Everris NA Inc	39-0-0	40.35	.00	.00	Within Tolerance	Pass
452005	Everris NA Inc	39-0-0	39.82	.00	.00	Pass	Pass
452006	Everris NA Inc	39-0-0	40.54	.00	.00	Pass	Pass
452007	Everris NA Inc	39-0-0	40.04	.00	.00	Pass	Pass
452008	Everris NA Inc	39-0-0	40.07	.00	.00	Pass	Pass
452011	Everris NA Inc	39-0-0	39.70	.00	.00	Pass	Pass
452012	Everris NA Inc	39-0-0	40.49	.00	.00	Within Tolerance	Within Tolerance
452013	Everris NA Inc	39-0-0	40.20	.00	.00	Pass	Pass
452014	Everris NA Inc	39-0-0	39.85	.00	.00	Pass	Pass
452015	Everris NA Inc	39-0-0	40.13	.00	.00	Pass	Pass
7663	Lawes Agricultural Service Inc	10-5-35	10.36	5.70	35.45	Within Tolerance	Within Tolerance
7593	Lawes Agricultural Service Inc	6-15-39	5.65	13.80	42.90		Fail
7592	Lawes Agricultural Service Inc	7-12-0	8.90	14.20	1.00		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7595	Lawes Agricultural Service Inc	7-12-0	7.77	13.70	.00		Pass
7591	Lawes Agricultural Service Inc	7-24-3	6.81	23.90	3.19	Pass	Within Tolerance
7603	Lawes Agricultural Service Inc	10-10-20	12.57	10.20	21.60	Within Tolerance	Fail
7586	Lawes Agricultural Service Inc	10-20-20	10.66	19.50	20.30		Within Tolerance
7660	Lawes Agricultural Service Inc	10-20-20	11.33	23.40	20.00		Pass
7661	Lawes Agricultural Service Inc	10-20-20	10.59	21.20	18.80		Within Tolerance
7579	Lawes Agricultural Service Inc	0-0-60	.00	.00	58.50		Within Tolerance
7668	Lawes Agricultural Service Inc	0-0-60	.00	.00	61.80		Pass
7590	Lawes Agricultural Service Inc	15-15-15	12.10	12.75	16.25		Fail
7665	Lawes Agricultural Service Inc	15-15-15	14.58	15.40	15.30		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7583	Lawes Agricultural Service Inc	18-46-0	17.50	46.20	.28		Within Tolerance
7587	Lawes Agricultural Service Inc	18-46-0	17.42	45.10	.25		Within Tolerance
7662	Lawes Agricultural Service Inc	18-46-0	17.14	43.85	.44		Fail
7589	Lawes Agricultural Service Inc	19-19-19	16.91	19.00	20.10		Fail
7594	Lawes Agricultural Service Inc	19-19-19	18.34	17.40	22.60		Fail
7598	Lawes Agricultural Service Inc	19-19-19	19.41	14.65	22.00		Fail
7667	Lawes Agricultural Service Inc	19-19-19	18.95	20.60	19.20		Within Tolerance
7669	Lawes Agricultural Service Inc	19-19-19	18.63	18.80	18.50		Within Tolerance
7601	Lawes Agricultural Service Inc	20-10-20	21.21	10.20	20.60	Fail	Fail
7599	Lawes Agricultural Service Inc	21.6-10.7-23.5	22.37	10.20	22.50		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7588	Lawes Agricultural Service Inc	24-12-18	22.55	13.50	16.80		Fail
7600	Lawes Agricultural Service Inc	24-12-18	32.78	11.70	18.90		Within Tolerance
7666	Lawes Agricultural Service Inc	24-12-18	25.82	11.40	17.60		Within Tolerance
7602	Lawes Agricultural Service Inc	28-3-16	32.99	2.45	15.20		Within Tolerance
7584	Lawes Agricultural Service Inc	30-0-20	29.60	.00	21.50		Within Tolerance
7578	Lawes Agricultural Service Inc	32-0-0	32.17	.00	.00		Pass
7580	Lawes Agricultural Service Inc	32-0-0	31.69	.00	.00		Within Tolerance
7596	Lawes Agricultural Service Inc	32-0-0	31.87	.00	.00		Within Tolerance
7577	Lawes Agricultural Service Inc	46-0-0	46.31	.00	.00		Pass
7581	Lawes Agricultural Service Inc	46-0-0	46.41	.00	.00		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7659	Lawes Agricultural Service Inc	46-0-0	45.84	.00	.00		Within Tolerance
7672	Lawes Agricultural Service Inc	46-0-0	45.97	.00	.00		Within Tolerance
7664	Lawes Agricultural Service Inc	7.5-13.8-36	8.55	14.20	35.30		Within Tolerance
452016	Northeast Agricultural Sales Inc	10-20-20	12.49	21.60	16.60		Fail
452017	Northeast Agricultural Sales Inc	10-20-20	10.48	19.40	18.80		Within Tolerance
452018	Northeast Agricultural Sales Inc	10-20-20	11.86	16.35	19.60		Fail
452001	Northeast Agricultural Sales Inc	12-12-20	13.56	13.60	20.40	Within Tolerance	Within Tolerance
452023	Northeast Agricultural Sales Inc	0-0-60	.00	.00	62.20		Pass
452024	Northeast Agricultural Sales Inc	0-0-60	.00	.00	67.20		Pass
452025	Northeast Agricultural Sales Inc	0-0-60	.00	.00	60.40		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
452026	Northeast Agricultural Sales Inc	0-0-60	.00	.00	61.20		Pass
452019	Northeast Agricultural Sales Inc	14.62-17.25-3.85	14.50	17.20	3.92	Pass	Within Tolerance
452020	Northeast Agricultural Sales Inc	14.62-17.25-3.85	14.51	23.20	6.60	Pass	Within Tolerance
452037	Northeast Agricultural Sales Inc	15-15-15	14.22	16.60	13.20		Fail
452029	Northeast Agricultural Sales Inc	16-8-16	14.34	10.60	12.45		Fail
452030	Northeast Agricultural Sales Inc	16-8-16	15.52	9.39	15.20		Within Tolerance
452031	Northeast Agricultural Sales Inc	16-8-16	16.73	9.70	13.20		Fail
452032	Northeast Agricultural Sales Inc	16-8-16	16.25	8.00	16.20		Pass
452028	Northeast Agricultural Sales Inc	17-17-17	15.85	18.10	15.80		Fail
452043	Northeast Agricultural Sales Inc	19-8-12	16.47	10.00	10.35		Fail

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
452044	Northeast Agricultural Sales Inc	19-8-12	19.53	9.67	11.04		Within Tolerance
452002	Northeast Agricultural Sales Inc	23-12-18	22.59	13.40	16.90		Within Tolerance
452038	Northeast Agricultural Sales Inc	24-10-16	23.09	12.10	14.40		Fail
452039	Northeast Agricultural Sales Inc	24-10-16	23.09	10.60	15.80		Within Tolerance
452033	Northeast Agricultural Sales Inc	24-6-12	19.51	8.82	9.08		Fail
452034	Northeast Agricultural Sales Inc	24-6-12	23.61	7.70	10.70		Fail
452022	Northeast Agricultural Sales Inc	25-0-15	21.40	.00	16.00		Fail
452021	Northeast Agricultural Sales Inc	28-7-14	27.39	7.51	13.30		Within Tolerance
452009	Northeast Agricultural Sales Inc	30-0-20	29.24	.00	18.80		Within Tolerance
452027	Northeast Agricultural Sales Inc	30-0-20	28.24	.00	21.20		Fail

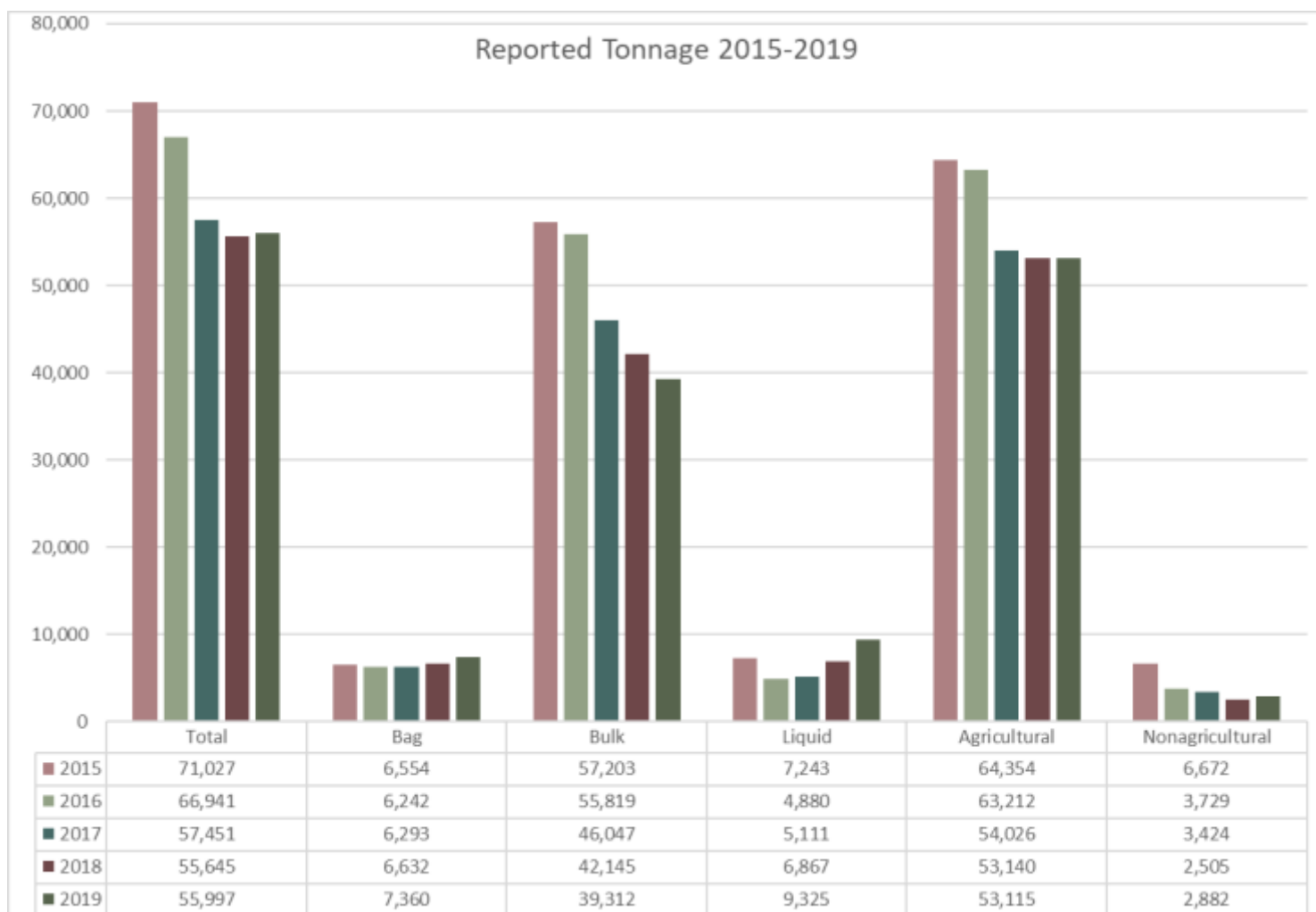
Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
7597	Servichem Synagri	0-0-60	.00	.00	62.70		Pass
7680	Sollio Agriculture	18-46-0	18.31	44.98	.32		Fail
7670	Yara Canada Inc	18-46-0	17.25	45.30	.54		Within Tolerance
7585	Yara Canada Inc	46-0-0	46.35	.00	.00		Pass
7671	Yara Canada Inc	46-0-0	45.50	.00	.00		Within Tolerance
7673	Yara Canada Inc	46-0-0	46.44	.00	.00		Pass

Tonnage Data 2019

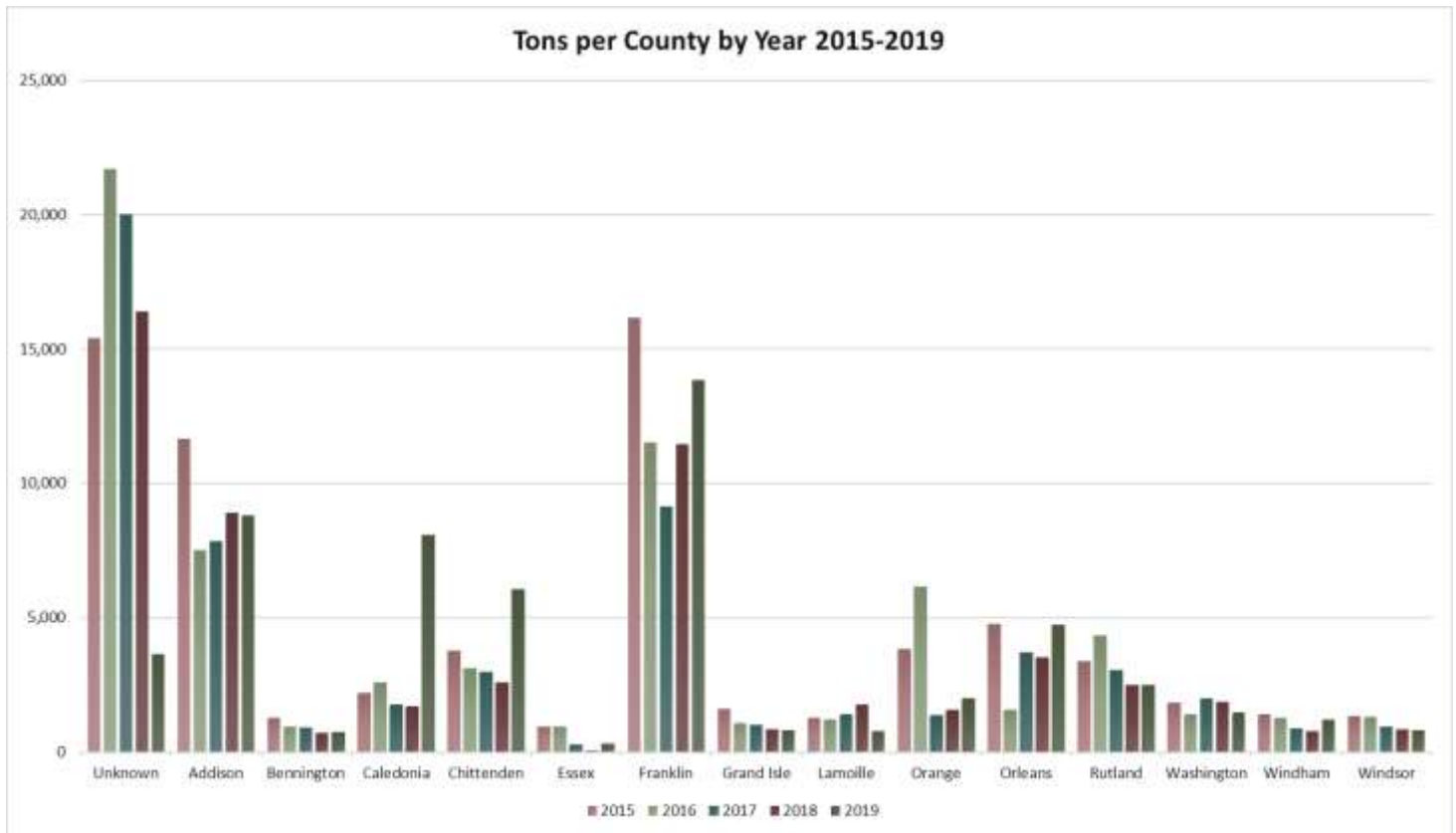
Total fertilizer tonnage reported summary

January 1, 2019-December 31, 2019

	Total (tons)	Container (tons)			Use (tons)	
		Bag	Bulk	Liquid	Agricultural	Nonagricultural
Multi-nutrient	8,838	821	7,372	645	8,575	264
Nitrogen	9,873	62	7,403	2,408	9,867	6
Phosphate	16	1	14	1	16	0
Potash	2,699	43	2,654	2	2,693	6
Sec/Micro & Misc.*	34,572	6,433	21,869	6,270	31,964	2,607
Total	55,998	7,360	39,312	9,326	53,115	2,883
*Misc. = lime, calcite, compost, etc.						



From 2015 through 2018 there was a gradual decrease in total reported tonnage. In 2018 there was a slight increase of reported bag and liquid fertilizer with a continued decrease of reported bulk fertilizer. Total tonnage increased slightly in 2019 with increases in bag and liquid fertilizer.

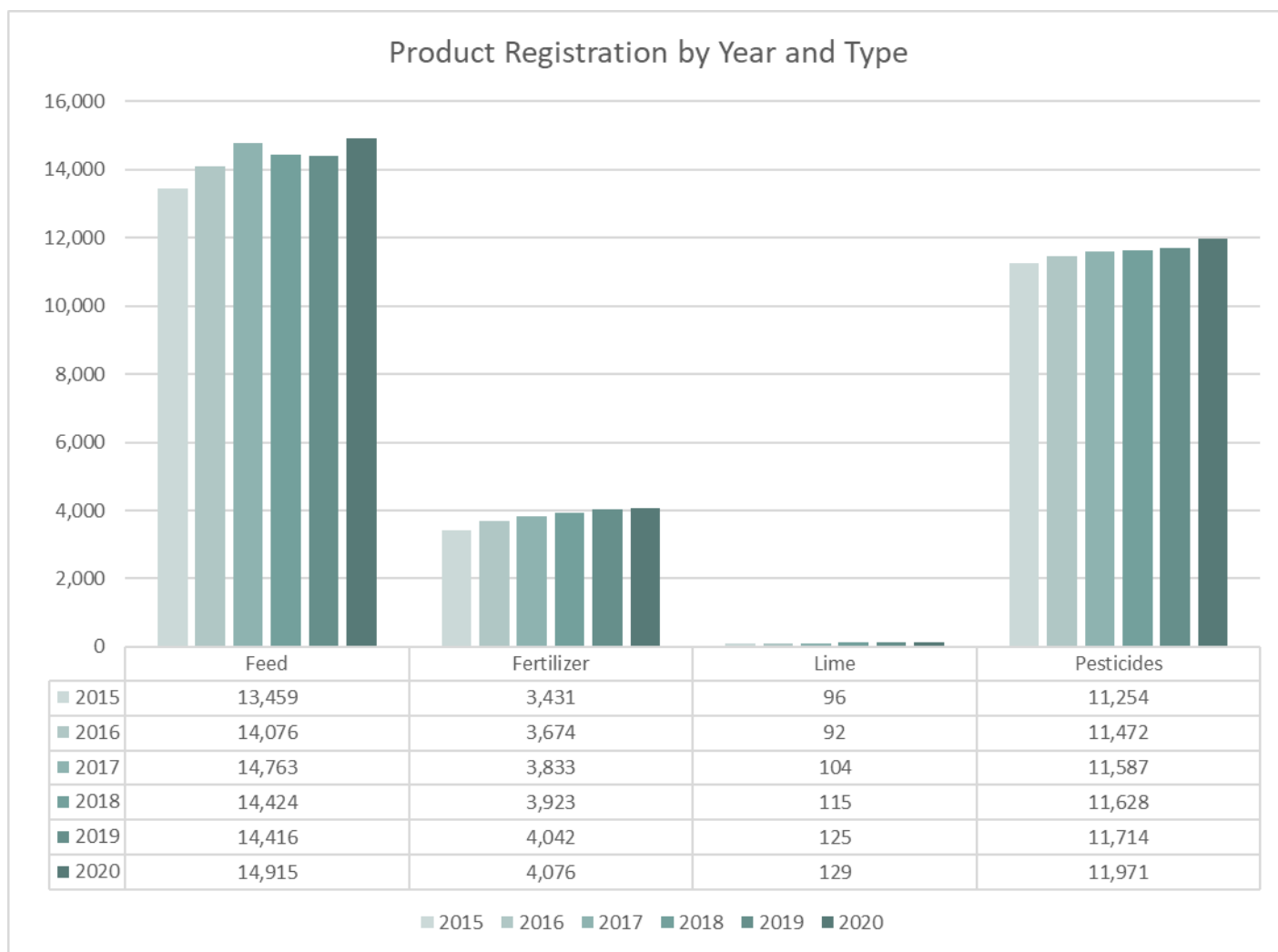


Note: increases in individual counties is most likely due to more accurate reporting as there has been a sharp decrease in “unknown” counties.

County	2015	2016	2017	2018	2019
Unknown	15,422	21,734	20,052	16,415	3,664
Addison	11,673	7,553	7,882	8,949	8,845
Bennington	1,267	933	896	706	736
Caledonia	2,196	2,613	1,763	1,713	8,092
Chittenden	3,813	3,150	3,000	2,588	6,069
Essex	934	958	296	47	325
Franklin	16,187	11,571	9,153	11,503	13,876
Grand Isle	1,623	1,062	1,008	847	820
Lamoille	1,275	1,203	1,415	1,787	776
Orange	3,850	6,197	1,364	1,586	2,017
Orleans	4,789	1,591	3,728	3,518	4,753
Rutland	3,396	4,363	3,072	2,494	2,515
Washington	1,849	1,400	2,009	1,869	1,469
Windham	1,396	1,288	868	764	1,213
Windsor	1,356	1,326	943	859	828
	71,027	66,941	57,449	55,644	55,997

2019 Product Registration

	2019 Products Registered	Percentage
Feed	14416	48
Fertilizer	4,042	13
Lime	125	<1
Pesticides	11,714	39
Total	30,231	100.00



Note: Data reported as of 12/31/2020. Feed registration year ends on January 31, 2021.